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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/829,154

04/22/2004

Takashi Aketa

0171-1087PUS1

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05/16/2006

BIRCH STEWART KOLASCH & BIRCH
PO BOX 747
FALLS CHURCH, VA 22040-0747

EXAMINER

SCHATZ, CHRISTOPHER

ART UNIT

PAPER NUMBER

1733

DATE MAILED: 05/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/829,154

Applicant(s)

AKETA ET AL.

Examiner

Christopher T. Schatz

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 February 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 and 11 is/are pending in the application.
- 4a) Of the above claim(s) 8 and 9 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-7 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art in view of Takuman et al. (EP 1225211) and Simizu et al. '140

The admitted prior art discloses a method of preparing an air bag, said method comprising: furnishing a pair of base fabric pieces impregnated and/or coated with silicone rubber; laying the pieces one on the other with the coated surfaces of the pieces inside; and bonding or stitching peripheral portions of the pieces together to form a bag (page 1, lines 17-22). The admitted prior art is silent as to the specific bonding means. Takuman et al. discloses an addition reaction adhesive for bonding silicone rubber having an elongation at break of at least 1000% (Table 1), said adhesive comprising: an organopolysiloxane containing at least two alkenyl radicals in a molecule; an organohydrogenpolysiloxane containing at least two silicon atom-bonded hydrogen atoms in a molecule; a platinum group metal catalyst (page 2, lines 34-41); and an organopolysiloxane resin having siloxane units containing alkenyl radicals and siloxane units of the formula: $\text{SiO}_{4/2}$ in a molecule (page 2, line 55). Using a silicone rubber adhesive of the disclosed composition is advantageous because, as disclosed by Takuman et al.,

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doing so provides superior adhesion to silicone coated materials (paragraph 0036). Therefore, at the time of the invention it would have been obvious to a person of ordinary skill in the art to modify the method disclosed by the admitted prior art by applying a silicone rubber adhesive with the composition taught by Takuman et al. to the peripheral portions of the base fabric pieces impregnated and/or coated with silicone rubber such that a superior bond is formed.

While the reference discloses the presence of aluminum hydroxide, Takuman et al. is silent as to the presence aluminum hydroxide powder.

Simizu '140 discloses a polyorganosiloxane adhesive wherein said adhesive comprises surface treated aluminum hydroxide powder with an average particle size of between 0.01 to 50 microns (column 4, lines 44-45). Using aluminum hydroxide powder with said particle size is advantageous because, as disclosed by Simizu, doing so provides for a smooth surface and appearance after curing (column 4, lines 45-47). Additionally, the use of smaller, powder-like particles is critical to having high elongation and a low modulus (column 4, lines 34-37).

Therefore, at the time of the invention it would have been obvious to a person of ordinary skill in the art to modify the method of the admitted prior art and Takuman et al. by using aluminum hydroxide powder in the silicone rubber adhesive as taught by Simizu. Such a modification would create a bond at peripheral portions of the base fabric pieces that has higher elongation.

As to claim 2, Takuman et al. discloses a method wherein the aluminum hydroxide has been surface treated with a surface treating agent selected from the group comprising of fatty acids, resin acids organosilazanes and alkoxysilanes (page 4, lines 30-31). As to claim 5, Takuman et al. discloses a method wherein a silicone rubber adhesive further comprises of an alkoxysilane or a partial hydrolytic condensate thereof (page 4, line 21). As to claims 6 and 7, Takuman et al.

discloses a method wherein the composition further comprises an organic titanium compound (paragraph 0021). As to claim 11, examiner first asserts that the claim, as currently worded, *does not exclude* the presence of other inorganic fillers. By using the language “wherein *an* inorganic filler”, applicant is establishing the presence of one inorganic filler, and then requiring that said one inorganic filler “consist essentially of the aluminum hydroxide powder.” However, the language *does not require only one organic filler*. Thus, examiner asserts that the combination of references discussed above meet the claim because Takuman et al. discloses aluminum hydroxide as an inorganic filler and Simizu et al. discloses why it would have been obvious to one of ordinary skill in the art to use aluminum hydroxide in the form of powder.

3. Claims 1-7 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art in view of Takuman et al. (EP 1225211) and Simizu et al. ‘140.

The admitted prior art discloses a method of preparing an air bag, said method comprising: furnishing a pair of base fabric pieces impregnated and/or coated with silicone rubber; laying the pieces one on the other with the coated surfaces of the pieces inside; and bonding or stitching peripheral portions of the pieces together to form a bag (page 1, lines 17-25). The admitted prior art is silent as to the specific bonding means. Takuman et al. discloses an addition reaction adhesive for bonding silicone rubber having an elongation at break of at least 1000% (Table 1), said adhesive comprising: an organopolysiloxane containing at least two alkenyl radicals in a molecule; an organohydrogenpolysiloxane containing at least two silicon atom-bonded hydrogen atoms in a molecule; a platinum group metal catalyst (page 2, lines 34-41); and an organopolysiloxane resin having siloxane units containing alkenyl radicals and siloxane units of the formula: $\text{SiO}_{4/2}$ in a molecule (page 2, line 55). Using a silicone rubber

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adhesive of the disclosed composition is advantageous because, as disclosed by Tackuman et al., doing so provides superior adhesion to silicone coated materials (paragraph 0036). Therefore, at the time of the invention it would have been obvious to a person of ordinary skill in the art to modify the method disclosed by the admitted prior art by applying a silicone rubber adhesive with the composition taught by Takuman et al. to the peripheral portions of the base fabric pieces such that a superior bond is formed.

While the reference discloses the presence of surface-treated calcium carbonate powder, Takuman et al. is silent as to the presence aluminum hydroxide powder. Simizu '140 discloses a polyorganosiloxane adhesive wherein said adhesive comprises surface treated aluminum hydroxide powder with an average particle size of between 0.01 to 50 microns (column 4, lines 44-45). In Table 1, Simizu et al. compares calcium carbonate with aluminum hydroxide, said aluminum hydroxide having an average particle size of between 0.01 to 50 microns. The table shows comparative examples a and c comprising calcium carbonate and comparative examples b, d, e, f, and g with aluminum hydroxide and no calcium carbonate. In every example without calcium carbonate but with the aluminum hydroxide, the adhesive has a higher elongation. More specifically, applicant is referred to example (c) and example (d). It is noted that the *only* difference between the compositions is that the composition of example (c) contains calcium carbonate and example (d) contains aluminum hydroxide instead of calcium carbonate. Example (d) discloses higher tensile strength and higher elongation. Therefore, at the time of the invention it would have been obvious to a person of ordinary skill in the art to modify the method of Takuman et al. by replacing Takuman et al.'s calcium carbonate powder with the aluminum

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hydroxide powder of Simizu et al. Such a modification would produce a composition that forms a stronger bond with a higher elongation at the peripheral portions of the base fabric pieces.

As to claim 2, Simizu et al. discloses a method wherein the aluminum hydroxide has been surface treated with a surface treating agent selected from the group comprising of fatty acids, resin acids organosilazanes and alkoxysilanes (example 6, example 8, column 4, lines 37-39). As to claim 5, Takuman et al. discloses a method wherein a silicone rubber adhesive further comprises of an alkoxysilane or a partial hydrolytic condensate thereof (page 4, line 21). As to claims 6 and 7, Takuman et al. discloses a method wherein the composition further comprises an organic titanium compound (paragraph 0021). As to claim 11, applicant is referred to the discussion of claim 11 in section 2 above for the reasons as to why the combination of references meets the limitation of the claim. Applicant should further note that even if the claim were amended to require that aluminum hydride be the only inorganic filler, the claim would still be rendered obvious over the above cited references. Takuman et al. discusses the use of calcium carbonate as an inorganic filler (component c, paragraph 0014), and examiner established above why it would have been obvious to one of ordinary skill in the art to use the aluminum hydroxide of Simizu et al. in place of the calcium carbonate in the method disclosed by Takuman et al. While Takuman et al. discusses a method wherein other inorganic filler are used, the reference discloses that said fillers are *optional* (paragraph 0018, 0020). Thus, examiner asserts that one of would have readily understood to perform the method disclosed by the admitted prior art and Takuman et al. with the aluminum hydroxide powder of Simizu et al. *in the absence of any other inorganic filler*.

Response to Arguments

Applicant's arguments with respect to the admitted prior art have been considered but are moot in view of the new ground(s) of rejection. Examiner acknowledges that since the attempt "to apply an adhesive silicone rubber composition as a sealer to the peripheral portions of the base fabric pieces prior to bonding" relates to subject matter studied by the present inventors, it does not constitute prior art. However, applicant should note that because bonding at the peripheral portions of a base fabric is well recognized in the prior art, and the silicone rubber adhesive of Takuman with the aluminum powder of Simizu et al. represents an adhesive that can advantageously be used to bond silicone rubber together, it would have been obvious to one of ordinary skill in the art to apply said adhesive at peripheral portion because said adhesive has favorable properties (see section 2 above). Examiner further asserts that the new grounds of rejection establish a prima facie case of obviousness as discussed in sections 2 and 3 above.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher T. Schatz whose telephone number is 571-272-1456. The examiner can normally be reached on 8:00-5:30, Monday -Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on 571-272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Christopher T. Schatz



RICHARD CRISPINO
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700